

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-29 are pending in this application. Claims 1, 3, 10, 12, 18, 20, 23, 26, and 28 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art in view of U.S. patent 3,777,367 to Kalagidis. Claims 2, 8, 13, 17, 21, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art and further in view of Kalagidis as applied to claims 1, 12, 20, and 23, and further in view of U.S. patent 5,119,466 to Suzuki. Claims 4 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art and further in view of Kalagidis as applied to claims 1 and 12, and further in view of U.S. patent 5,598,045 to Ohtake et al. (herein "Ohtake"). Claims 5, 9, 7, 11, 15, 19, 22, 25, 27, and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art and further in view of Kalagidis as applied to claims 1, 20 and 23, and further in view of U.S. patent 4,514,670 to Fassel et al. (herein "Fassel"). Claims 6 and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over applicants' admitted art and further in view of Kalagidis and Ohtake and Fassel.

Addressing each of the above-noted rejections, each of those rejections is traversed by the present response.

Initially, with respect to independent claims 1, 12, 20, and 26, each of those claims is amended by the present response to clarify a feature recited therein. Specifically, each of those claims now more clearly recites that the "flat disc-shaped electrical parts mounting base board" has a structure "such that a first flat surface of the electrical parts mounting base board faces the rotor". Those claims also now further clarify that the contact electrode part and the plane conductive layer pattern are directly formed on "a second flat surface of the electrical parts mounting base board".

The claimed features are believed to be clear for example from Figure 1 in the present specification showing the electrical parts mounting base board 23 having a flat surface facing the rotor 22. Further, such features are believed to clearly distinguish over the applied art.

Each of the above-noted rejections initially relies upon a combination of teachings of applicants' admitted art in view of Kalagidis. However, applicants respectfully submit that basis for each of the rejections has not properly considered each of the positively recited claimed features, and that the clarified claims even further distinguish over the applied art.

First, the Office Action recognizes that applicants' admitted art "does not disclose an electrical parts mounting baseboard in contact with the rotational shaft and a commutator including a contact electrode pad formed with a plan conductive layer".¹ To overcome that recognized deficiency in applicants' admitted art, the Office Action now cites the teachings in Kalagidis with respect to disclosing a commutator C with a contact electrode part B with a plane conductive layer pattern 24-26.²

However, applicants respectfully submit the above-noted basis for the outstanding rejection has not properly considered each of the claim limitations. More particularly, independent claims 1, 12, and 26 do not merely recite an electrical parts mounting base board, but instead recite "a ***flat disc-shaped*** electrical parts mounting base board fixed on the rotation shaft such that the rotation shaft perpendicularly intersects to the electrical parts mounting base board and such that a first ***flat surface*** of the electrical parts mounting base board ***faces the rotor***" (emphasis added); independent claim 20 also recites a "flat disc-shaped electrical parts mounting base board and such that a first flat surface of the electrical parts mounting base board faces the rotor".

¹ Office Action of June 30, 2004, page 3, lines 7-9.

² Office Action of June 30, 2004, page 3, lines 10-16.

With reference to Figures 1 and 2 in the present specification as a non-limiting example, the base board 23 is a *flat disc-shaped* base board, which the rotation shaft 21 perpendicularly intersects, and in which a flat surface thereof faces the rotor 22. Such a structure is believed to be neither taught nor suggested by the admitted art nor Kalagidis, and thus is not taught or suggested by a combination thereof.

More particularly, the admitted art, presumably Figure 17 in the present specification, discloses a commutator CM0 that has a cylindrical surface. Clearly that commutator CM0 in the admitted art is not a “flat disc-shaped electrical parts mounting base board... and such that a first flat surface of the electrical parts mounting base board faces the rotor”, as positively recited in the noted claims.

Moreover, Kalagidis, for example in Figure 1, also clearly shows a commutator C with contact electrode parts B also having a cylindrical form similarly as in the background art of Figure 17. In such ways, Kalagidis also does not teach or suggest a “*flat disc-shaped* electrical parts mounting base board...such that the rotation shaft perpendicularly intersects the electrical parts mounting base board and such that a first flat surface of the electrical parts mounting base board faces the rotor” (emphasis added), as positively recited in the noted claims. Thus, the teachings in Kalagidis clearly cannot overcome the deficiencies in the admitted art of Figure 17 with respect to the above-noted claim features.

The Advisory Action of November 4, 2004, further sets forth as a position for maintaining the rejection that “Kalagidis discloses in the abstract and as shown in figures 1 and 7, that the electrical parts mounting base board (commutator) is of flat disc shaped and further fixed on the rotational shaft”.

In response to that basis for maintaining the rejection, applicants note each of Kalagidis and the admitted art disclose cylindrical formed commutators. Neither the admitted art nor Kalagidis discloses or suggests that a flat surface of such commutators face a

rotor. Further, neither the admitted art nor Kalagidis discloses or suggests that the flat surface of such commutators has a contact electrode part and a plane conductive layer pattern directly formed thereon.

In such ways, the amendments to the above-noted claims are believed to even further distinguish the above-noted claims over the applied art.

Further, with respect to independent claims 10, 18, and 28, each of those claims positively recites “wherein the respective sliding contact positions of the electrical brushes with the contact electrode part are shifted in the radial direction”. That feature is also believed to be neither taught nor suggested by the applied art.

As shown for example in Figures 8 and 14 in the present specification, respective sliding contact positions of the electrical brushes 16A, 16B are shifted in the radial direction. That feature is not met by the applied art.

With respect to the above-noted feature, the Office Action states, with respect to the admitted art, “APA discloses a pair of electrode brushes in sliding contact with the contact electrode part of the commutator at respective sliding contact positions of a different distance from an axis of the rotation and is configured to supply electric power to the rotor coils through the commutator”.³

That basis for the outstanding rejection is not at all understood and is not believed to meet the noted claim limitations.

As clearly shown in Figure 17 of the background art, each of the electrode brushes B01 and B02 are not offset in any manner and directly face each other. Such a feature in the background art does not correspond to the claimed features, and it is unclear on what basis the outstanding rejection is relying upon such teachings to meet the claim limitations noted above. Applicants respectfully submit that the background art does not teach or suggest the

³ Office Action of June 30, 2004, page 2.

claim structure that the respective sliding contact positions of the electrode brushes with the contact electrode parts are shifted in the radial direction, as required in independent claims 10, 18, and 28.

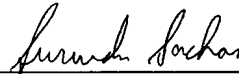
In such ways, applicants respectfully submit that each of independent claims 10, 18, and 28, and the claims dependent therefrom, also distinguish over the outstanding rejections.

In such ways, applicants respectfully submit that each of the pending claims is allowable over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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